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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,175	04/27/2001	Warren M. Farnworth	MI22-1703	4157

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EXAMINER

KOBERT, RUSSELL MARC

ART UNIT PAPER NUMBER

2829

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/844,175

Applicant(s)

FARNWORTH ET AL.

Examiner

Russell M Kobert

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2003 and 03 July 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 31-42, 54-65 and 67-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31, 33, 34, 37-42, 54, 57, 60-62, 64 and 67-70 is/are rejected.
- 7) ☒ Claim(s) 32, 35, 36, 55, 56, 58, 59, 63 and 65 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. In view of Applicants' cancellation of claims 66, 71 and 72, the requirement to elect in the Restriction mailed on June 3, 2003 is hereby withdrawn.

2. Applicant's arguments with respect to claims 31-42, 54-65 and 67-70 have been considered but are moot in view of the new ground(s) of rejection, based on amendment D.

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8/24/03

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 31, 33-34, 37-42, 54, 57, 60-62, 64 and 67-70 are rejected under 35 U.S.C. 102(e) as being anticipated by Widder et al (5239260).

Widder et al anticipates (Figure 1) a removable electrical interconnect apparatus (16) for removably engaging electrically conductive pads (12) on a semiconductor substrate (10) having integrated circuitry fabricated therein (col 3, ln 57-59), the apparatus comprising: a substrate (26); and an engagement probe (20) projecting from the substrate to engage a single conductive pad (12) on a semiconductor substrate (10) having integrated circuitry (col 3, ln 57-59) formed in the semiconductor substrate, the engagement probe having an outer surface comprising an apex (any of one of the

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corner edges formed at the bottom portion of engagement probe 20) in the form of at least one knife-edge line (any line formed by truncated pyramid 20 shown at the far edges of contact 22) and comprising semiconductor material and configured to removably engage the single conductive pad of the substrate comprising operable integrated circuitry and to removably engage another single conductive pad of another substrate also comprising operable integrated circuitry (col 4, ln 33-54); as recited in claim 31.

Widder et al anticipates (Figure 1) a removable engagement probe (20) having an outer surface comprising an apex (any of one of the corner edges formed at the bottom portion of engagement probe 20) in the form of at least one knife-edge line (any line formed by truncated pyramid 20 shown at the far edges of contact 22) and comprising semiconductor material (col 4, ln 33-35) and sized and positioned to engage a single conductive pad (12); and wherein the knife-edge line projects from a penetration stop plane (bottom portion of 32); as recited in claim 54.

As to claim 33, Widder et al anticipates the knife-edge line projects from a penetration stop plane (clearly shown in Figure 1 in view of the identification of components noted supra).

As to claims 34 and 57, Widder et al anticipates the knife-edge line projects from a penetration stop plane (as noted supra), the knife-edge line having a tip and having a base at the penetration stop plane (clearly shown in Figure 1 in view of the identification of components noted supra), the tip being a distance from the penetration stop plane of

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about one-half the thickness of the conductive pad which the apparatus is adapted to engage (considered an inherent characteristic of Widder et al).

As to claims 37 and 60, Widder et al anticipates the outermost portions of the electrically conductive apexes constitute a first electrically conductive material (gold as identified at col 4, ln 47), wherein the conductive pads for which the apparatus is adapted have outermost portions constituting a second electrically conductive material; the first and second electrically conductive materials being different (based on the rationale that the first electrically conductive material is not limited to gold; see col 4, ln 46-47 and col 6, ln 17-29).

As to claims 38 and 61, Widder et al anticipates the engagement probe is formed from a semiconductor substrate (col 4, ln 55-65).

As to claim 39, Widder et al anticipates the knife-edge line includes an outer conductive layer (22).

As to claim 40, Widder et al anticipates the outer surface includes plural knife-edge lines (shown as edges of truncated pyramid in Figure 1) configured to engage the single conductive pad.

As to claim 41, Widder et al anticipates the engagement probe is formed from a semiconductor substrate (col 4, ln 55-65) and the outer surface includes plural knife-edge lines (shown as edges of truncated pyramid in Figure 1) configured to engage the single conductive pad.

As to claim 42, Widder et al anticipates the engagement probe is formed from a semiconductor substrate (col 4, ln 55-65) and the outer surface includes plural knife-

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edge lines (shown as edges of truncated pyramid in Figure 1) configured to engage the single conductive pad (12) and the knife-edge lines include outer conductive layers (20, 21 and col 6, ln 24-26).

Moreover, the limitations of claims 62, 64, 67, 68, 69 and 70 are considered inherent in the apparatus of Widder et al or are within the normal range of operating the apparatus of Widder et al.

5. The following is a statement of reasons for the indication of allowable subject matter:

Claims 32, 35, 36, 55, 56, 58, 59, 63 and 65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The added limitation of the engagement probe formed on a projection from the substrate as mentioned in claims 32 and 55 has not been found.

The added limitation of the outer surface comprising a plurality of apexes having respective tips and bases, and the penetration stop plane intermediate the bases and substantially parallel to a surface of a substrate as mentioned in claim 56 has not been found.

The added limitation of the engagement probe formed on a projection from the substrate, the knife-edge line projecting from a penetration stop plane on the projection as mentioned in claims 35 and 58 has not been found.

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The added limitation of the engagement probe formed on a projection from the substrate, the knife-edge line projects from a penetration stop plane on the projection, the knife-edge line having a tip and having a base at the penetration stop plane, the tip being a distance from the penetration stop plane of about one-half the thickness of the conductive pad which the apparatus is adapted to engage as mentioned in claims 36 and 59 have not been found.

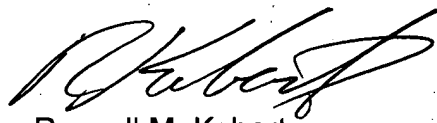
6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

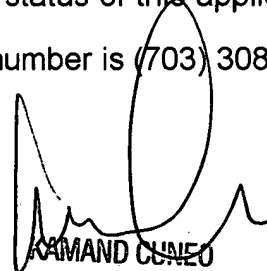
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Kobert whose telephone number is (703) 308-5222.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Russell M. Kobert  
Patent Examiner  
Group Art Unit 2829  
August 14, 2003



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